

CLAIMS

What is claimed is:

- 1 1. A method, comprising:
2 interacting with a debugging interface for receiving instructions to
3 debug during a debugging session;
4 maintaining coherence between a simulation mode and an emulation
5 mode; and
6 switching between the emulation mode and the simulation mode
7 during the debugging session.
- 1 2. The method of claim 1 further comprising debugging a number of the
2 instructions by a simulator while in the simulation mode.
- 1 3. The method of claim 1 further comprising debugging a number of the
2 instructions by an emulator while in the emulation mode.
- 1 4. The method of claim 1 wherein interacting further includes displaying,
2 by the debugging interface, a current state of a resource associated with the
3 instructions during the debugging session.
- 1 5. The method of claim 1 wherein interacting further includes receiving,
2 by the debugging interface, manual commands to debug the instructions
3 during the debugging session.
- 1 6. The method of claim 1 wherein interacting further includes receiving,
2 by the debugging interface, script commands to debug the instructions
3 during the debugging session.
- 1 7. The method of claim 6 wherein interacting further includes receiving
2 by the debugging interface, a switch command to process the switching

3 between the emulation mode and the simulation mode.

1 8. A method, comprising:

2 establishing a debugging session to debug instructions;
3 maintaining coherent states between logical and physical resources
4 that are used to debug the instructions during the debugging session; and
5 passing control of the debugging session between a simulator that
6 manages the logical resources and an emulator that manages the physical
7 resources during the debugging session.

1 9. The method of claim 8 further comprising interfacing with a
2 debugging interface that supplies a switch mode command, which drives the
3 passing of control.

1 10. The method of claim 9 further comprising transmitting the coherent
2 states to the debugging interface.

1 11. The method of claim 8 further comprising interfacing with a script that
2 supplies a switch mode command, which drives the passing of control.

1 12. The method of claim 8 further comprising:
2 acquiring control from the simulator when control is with the
3 simulator in response to receiving a switch mode command; and
4 passing control to the emulator.

1 13. The method of claim 8 further comprising:
2 acquiring control from the emulator when control is with the emulator
3 in response to receiving a switch mode command; and
4 passing control to the simulator.

1 14. The method of claim 8 further comprising, receiving the instructions

2 from a debugging interface.

1 15. A system, comprising:

2 a debugging interface to receive instructions that are to be debugged
3 during a debugging session;

4 a controlling interface to maintain coherence between a simulation
5 mode and an emulation mode associated with the debugging session; and

6 a debugging execution interface to debug a number of the
7 instructions while the debugging session is in the simulation mode or the
8 emulation mode;

9 wherein the debugging interface communicates with the controlling
10 interface and the controlling interface communicates with the debugging
11 execution interface.

1 16. The system of claim 15 wherein the debugging execution interface
2 further includes:

3 a simulator to process a number of the instructions while in the
4 simulation mode; and

5 an emulator to process a number of the instructions while in the
6 emulation mode.

1 17. The system of claim 15 wherein the debugging interface supplies the
2 instructions to the controlling interface.

1 18. The system of claim 15 wherein the debugging interface supplies a
2 switch mode command to the controlling interface and in response to the
3 switch mode command the controlling interface sets at least one of the
4 simulation mode and emulation mode and switches control of the debugging
5 session by communicating with the debugging execution interface.

1 19. A machine accessible medium having associated data, which when
2 accessed, carries out in a machine the method of:

3 establishing a debugging session to debug instructions;
4 maintaining coherent states between logical and physical resources
5 that are used to debug the instructions during the debugging session; and
6 changing control between simulation modes associated with the
7 logical resources and emulation modes associated with the physical
8 resources during the debugging session.

1 20. The medium of claim 19 wherein the debugging session is
2 established and driven by a debugging interface.

1 21. The medium of claim 19 wherein control is changed between a
2 simulator for the simulation modes and an emulator for the emulation
3 modes.

1 22. An apparatus in a computer accessible medium comprising:
2 a simulator;
3 an emulator; and
4 a debugging session manager, wherein the debugging session
5 manager manages a debugging session to debug instructions, and wherein
6 during the debugging session a number of the instructions are selectively
7 processed by the emulator and a number of the instructions are selectively
8 processed by the simulator.

1 23. The apparatus of claim 22 wherein the debugging session manager
2 interacts with a debugging interface to receive the debug instructions and
3 establish the debugging session.

1 24. The apparatus of claim 23 wherein the debugging session manager

2 selectively determines which of the instructions that the simulator and
3 emulator process based on commands received from the debugging
4 interface.

1 25. The apparatus of claim 23, wherein the debug session manager
2 passes control between the simulator and the emulator as many times as is
3 requested during the debug session.